

New Source Review Offsets in California



Integrated Energy Policy
Report Committee
Air Emissions, Public Health
and Energy Workshop

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AIR RESOURCES BOARD

New Source Review

- ❖ Preconstruction permit program governing **new** and **modified** (expanding) stationary sources in nonattainment areas
- ❖ Applies to most areas in California, especially heavily populated areas

New Source Review: Why Do We Have Offsets?

- ❖ **Two major elements of NSR**
 - ◆ **BACT**
 - ◆ **Offsets**
- ❖ **Offsets designed to balance new emission increases with emission decreases from existing sources**
- ❖ **Allows industrial growth in areas that do not attain air quality standards**

Federal and State Offset Requirements

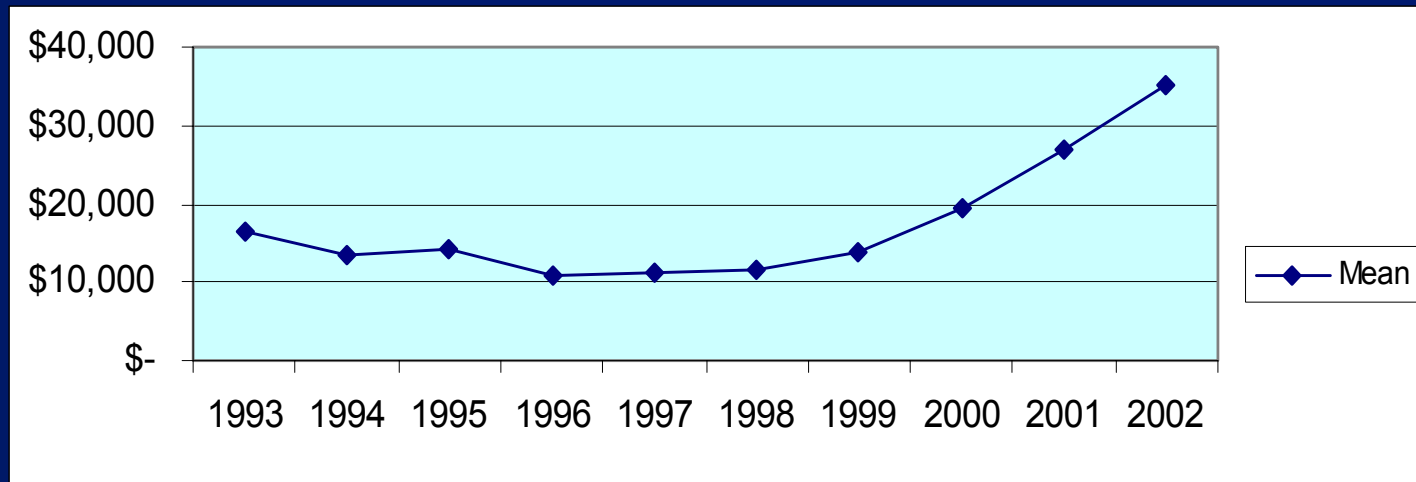
How Do They Mesh in California?

- ❖ **Offsets required by federal Clean Air Act in non-attainment areas**
- ❖ **California Clean Air Act requires “no net increase in emissions”**
- ❖ **California requirements generally more stringent than federal requirements**
- ❖ **Local district rules consolidate State and federal requirements**

Offset Statistics

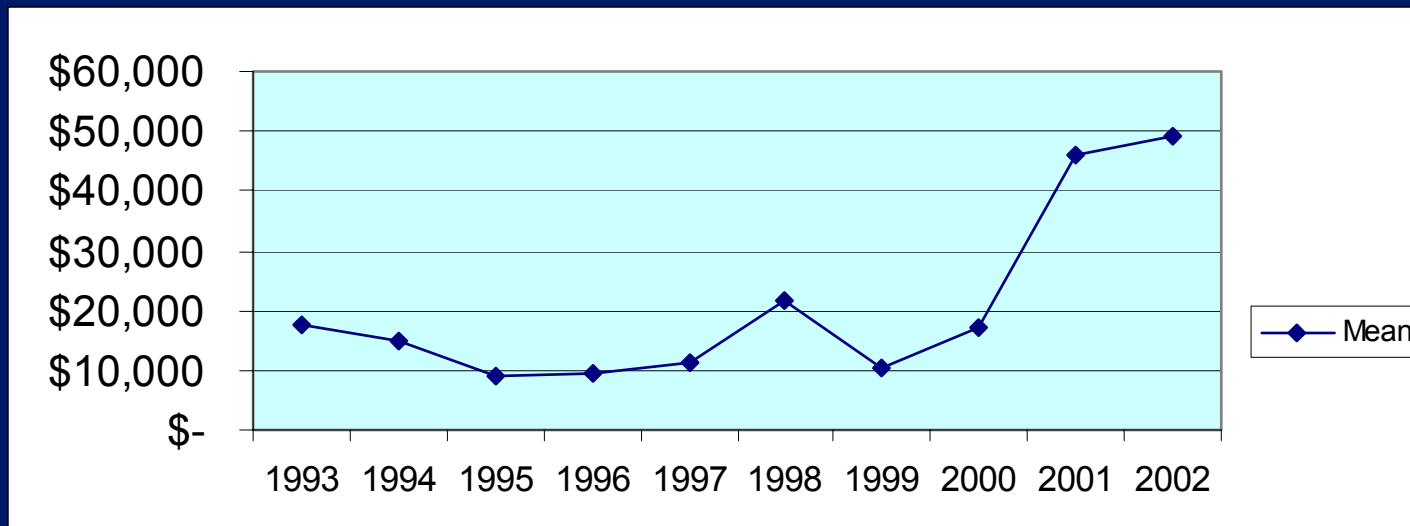
- ❖ ARB has collected cost data from California air districts since 1993
- ❖ Does not identify parties involved in trade
- ❖ Latest report covered 2002
- ❖ www.arb.ca.gov/erco/erco.htm
- ❖ Each air basin constitutes its own separate offset market

Statewide Offset Costs, NO_x



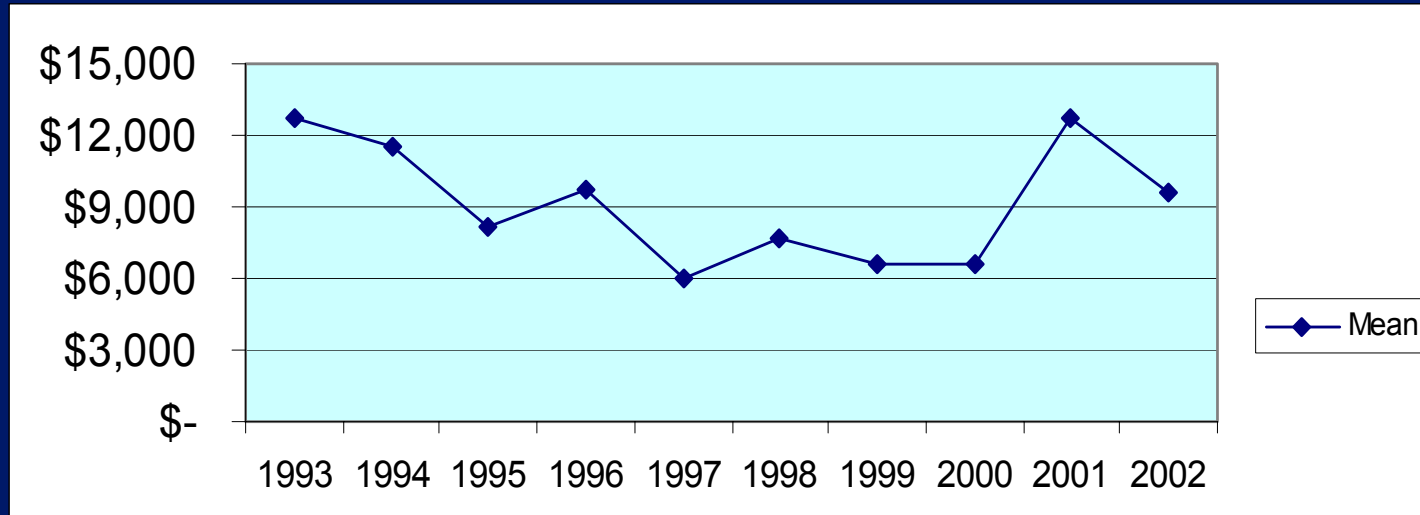
- ❖ Average NO_x price rising over past several years
- ❖ Average NO_x price in 2002: \$35,000/ton
- ❖ High price: \$140,000/ton
- ❖ Low price: \$990/ton

Statewide Offset Costs, PM₁₀



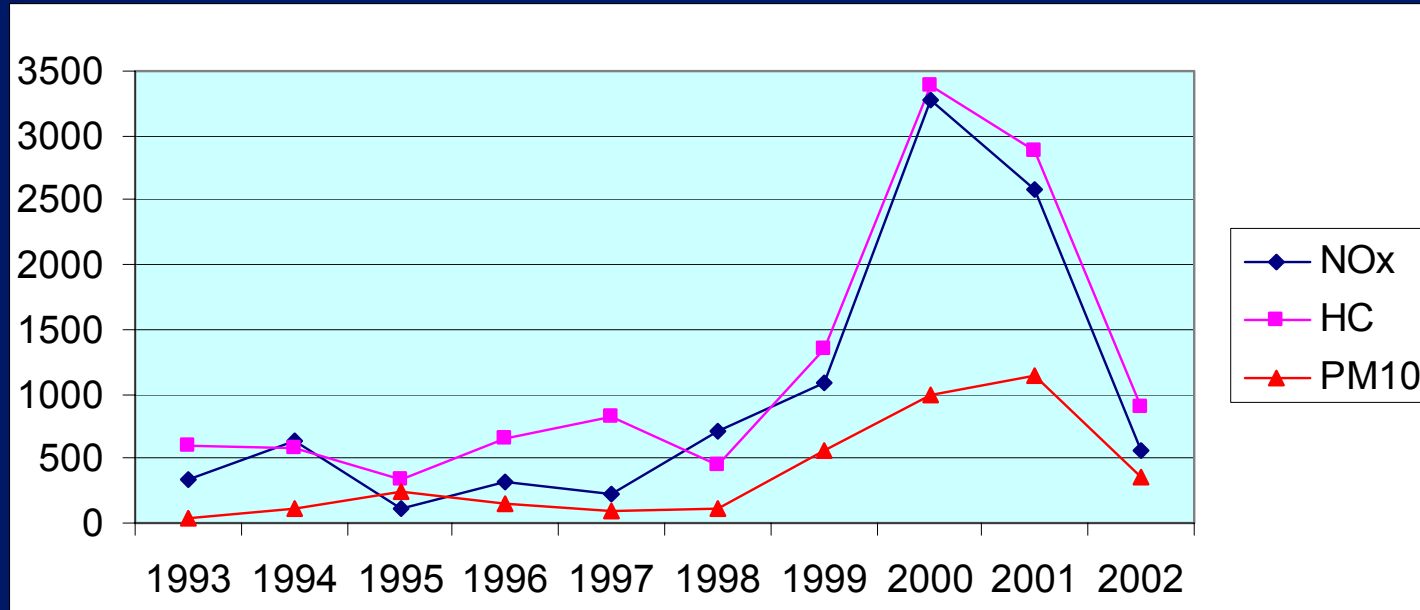
- ❖ Dramatic increase in average PM₁₀ price in 2001 - Smaller rise in 2002
- ❖ Average PM10 price in 2002: \$49,000/ton
- ❖ High price: \$137,000/ton
- ❖ Low price: \$3,300/ton

Statewide Offset Costs, VOCs



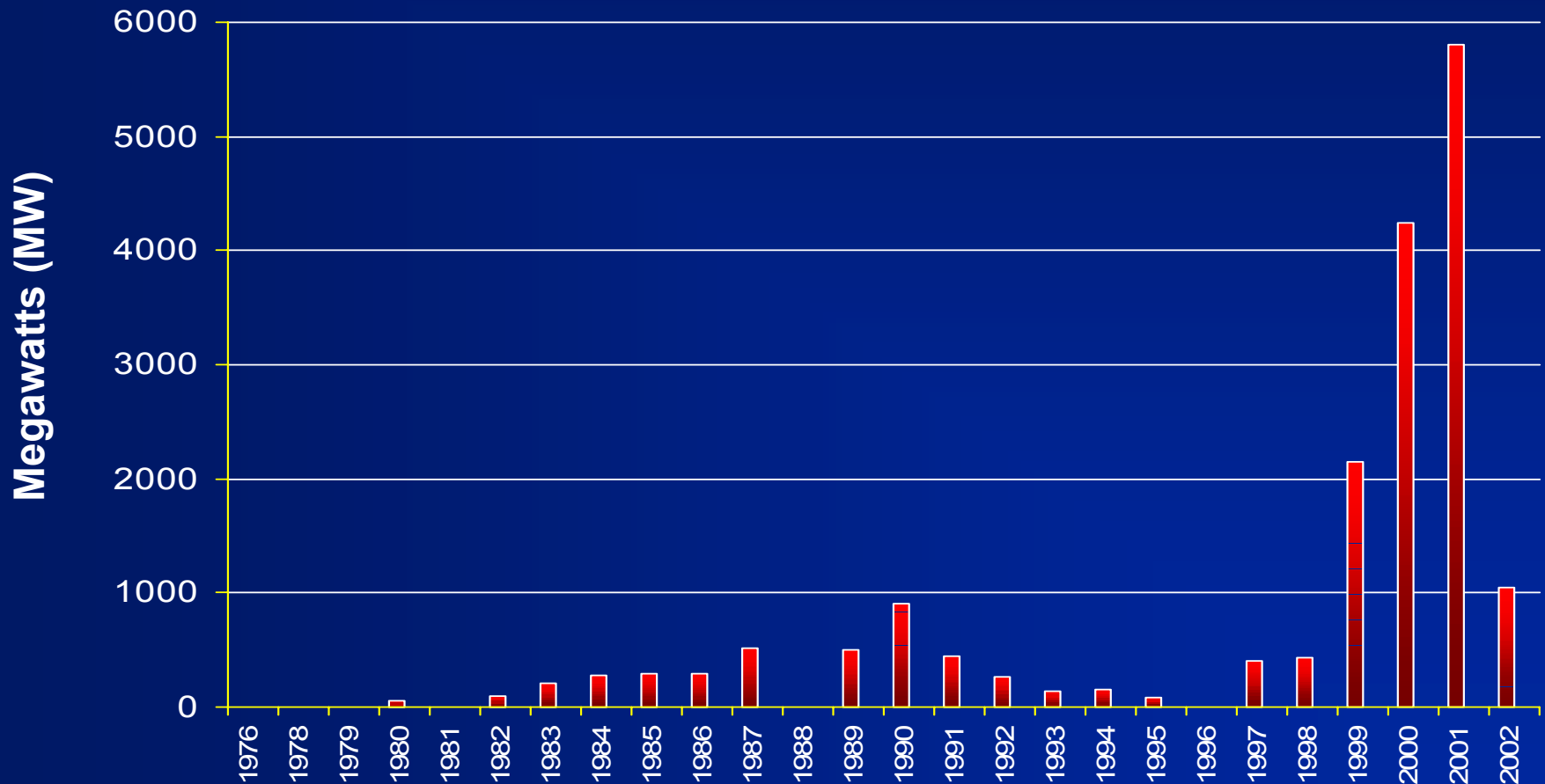
- ❖ Average VOC price in 2002 declining
- ❖ Average VOC price in 2002: \$9,600/ton
- ❖ High price: \$70,000/ton
- ❖ Low price: \$490/ton

Number of Tons Traded Statewide



- ❖ Number of tons traded increased greatly starting in 1999
- ❖ Volume dropped in 2002
- ❖ NO_x and VOC - largest number of tons

Power Plant Projects Approved By Year (1976 to 2002)



Source: California Energy Commission

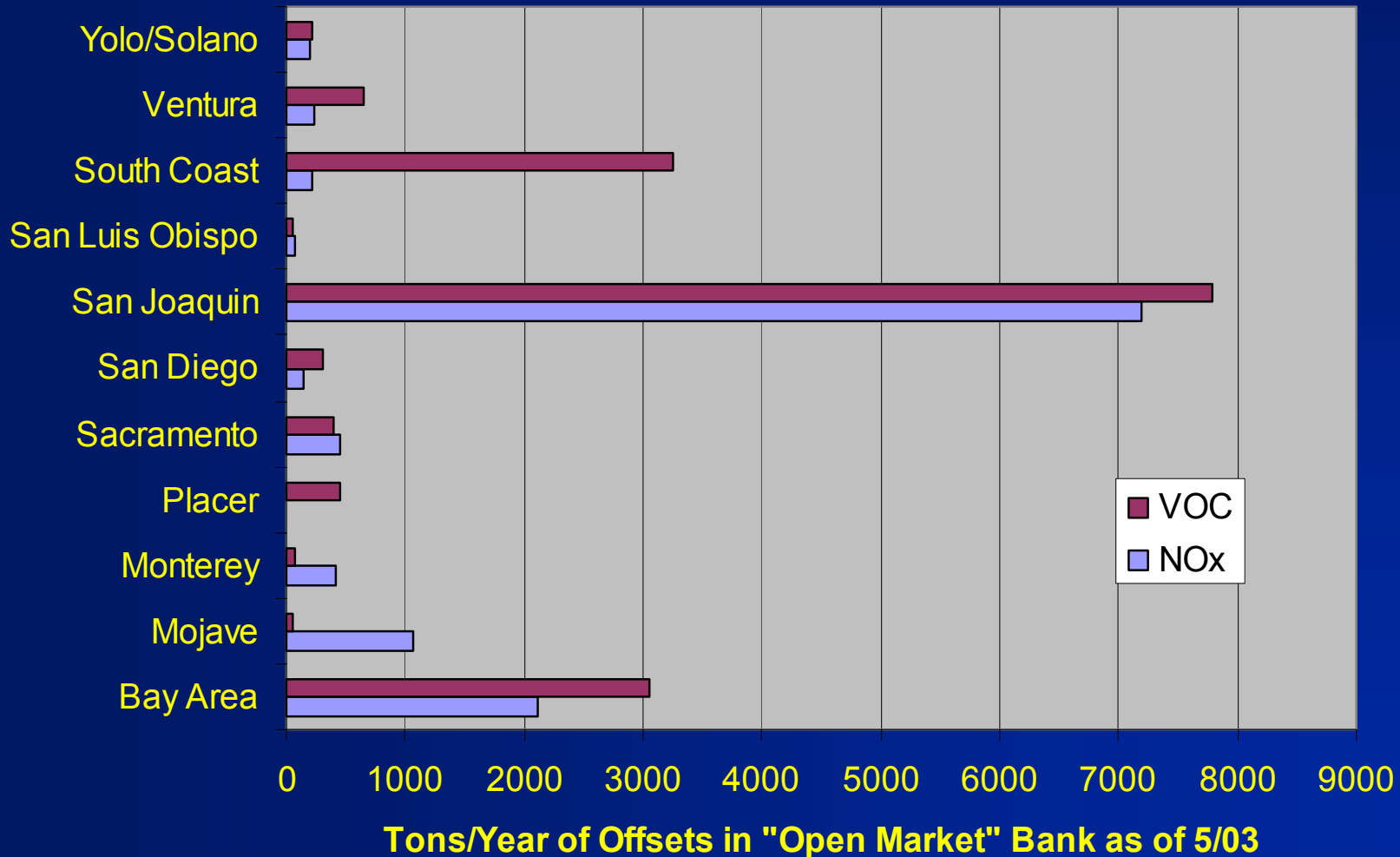
Types of Offsets Traded

- ❖ **Types of offset transactions reported for 2002:**
 - ◆ **98 percent from stationary sources**
 - ◆ **About 2 percent from agricultural sources (e.g. cessation of rice burning)**
 - ◆ **Less than one percent from mobile sources**

Types of Offsets Banked

- ❖ Districts report offsets above certain size threshold to ARB before banking
- ❖ 1997 -1999
 - ◆ 75 to 80 percent shutdowns
 - ◆ 20 to 25 percent equipment modifications
- ❖ 2000 - 2002
 - ◆ 50 to 60 percent shutdowns
 - ◆ 10 to 25 percent modifications
 - ◆ 30 - 40 percent reductions in agricultural burning in 2000 & 2001 - 4 percent in 2002
 - ◆ 7 to 13 percent road paving

Comparison of Offset Amounts in Various District Banks



Implications for Power Plant Construction

- ❖ Obtaining sufficient offsets may present challenges in some areas
- ❖ Opportunities for innovation

FUTURE NSR CHANGES

- ❖ **Amendments to Federal New Source Review regulations**
- ❖ **SB 288 - inserts previous federal NSR into California law**
- ❖ **Clear Skies Initiative**